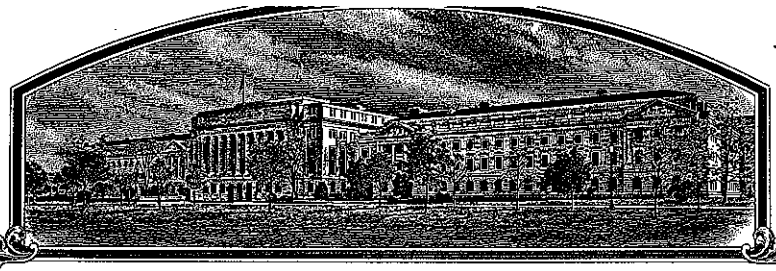
No. 200100102



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

President, Colorado Certified Potato Growers' Assn., Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

POTATO

'Silverton Russet'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this seventh day of February, in the year two thousand and eight.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions*

200100102

Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER
President
Colorado Certified Potato Growers' Assn., Inc.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME
AC83064-6

3. VARIETY NAME
Silverton Russet

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
P.O. BOX 267
Monte Vista, CO 81144

5. TELEPHONE *(include area code)*
(719) 754-3496

6. FAX *(include area code)*
(719) 754-2619

FOR OFFICIAL USE ONLY

PVPO NUMBER
200100102

FILING DATE
02/08/01

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*
Association

8. IF INCORPORATED, GIVE STATE OF INCORPORATION
Colorado

9. DATE OF INCORPORATION
April, 1996

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*

Dr. Preston Stanley
President, Colorado Certified Potato Growers' Assn., Inc.
P.O. BOX 267
Monte Vista, CO 81144

LMC Sept 14, 2007

FEES RECEIVED

FILING AND EXAMINATION FEES:
$ 2705
DATE 02/08/01

CERTIFICATION FEE:
$
DATE

11. TELEPHONE *(Include area code)*
(719) 754-3496

12. FAX *(Include area code)*
(719) 754-2619

13. E-MAIL
slvctr@coop.ext.colostate.edu

14. CROP KIND *(Common Name)*
Irish Potato

18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)

- a. [X] Exhibit A. Origin and Breeding History of the Variety
- b. [X] Exhibit B. Statement of Distinctness
- c. [X] Exhibit C. Objective Description of Variety
- d. [ ] Exhibit D. Additional Description of the Variety *(Optional)*
- e. [X] Exhibit E. Statement of the Basis of the Owner's Ownership
- f. [X] Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
- g. [X] Filing and Examination Fee ($2,450), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *See Section 83(a) of the Plant Variety Protection Act)*
[ ] YES *(If "yes", answer items 20 and 21 below)* [XX] NO *(If "no," go to item 22)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? [ ] YES [ ] NO
IF YES, WHICH CLASSES? [ ] FOUNDATION [ ] REGISTERED [ ] CERTIFIED

21. DOES THE OWNER SPECIFY THAT THE CLASSES BE LIMITED AS TO NUMBER OF GENERATIONS? [ ] YES [ ] NO
IF YES, SPECIFY THE NUMBER 1, 2, 3, etc. [ ] FOUNDATION [ ] REGISTERED [ ] CERTIFIED
(If additional explanation is necessary, please use the space indicated on the reverse.)

22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
XX YES NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
[ ] YES [X] NO
IF YES, GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties:

SIGNATURE OF OWNER	SIGNATURE OF OWNER
NAME *(Please print or type)* Charles Higgins	NAME *(Please print or type)*
CAPACITY OR TITLE: President CCPGA, Inc.	DATE: 12/22/00
CAPACITY OR TITLE	DATE

S&T-470 (2-99) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD-470 (6-98) which is obsolete. *(See reverse for instructions and information collection burden statement)*

INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable *(in the sense that it will reproduce an entire plant)* tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for $2,450 ($300 filing fee and $2,150 examination fee), payable to "Treasurer of the United States" *(See Section 97.6 of the Regulations and Rules of Practice.)* Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. DO NOT use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of $300 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office
Telephone: (301) 504-5518
FAX: (301) 504-5291
Homepage: http://www.ams.usda.gov/science/pvp.htm

ITEM

18a. Give:
(1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified

18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:

(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.

18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.

18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, *etc.*

18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.

19. If "Yes" is specified *(seed of this variety be sold by variety name only, as a class of certified seed)*, the applicant MAY NOT reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. *(See Regulations and Rules of Practice, Section 97.103).*

22. *See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.*

23. *See Section 5.5 of the Act for instructions on claiming the benefit of an earlier filing date.*

22. CONTINUED FROM FRONT *(Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)*

Tissue-cultured plantlets, and tuber seed stocks of this selection were pre-released to local seed growers for research and evaluation purposes under an agreement regarding experimental potato selections. A copy of this agreement is attached at Appendix 1.

23. CONTINUED FROM FRONT *(Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)*

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. *(See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)*

To avoid conflict with other variety names in use, the applicant must check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center--East, Beltsville, MD 20705. Telephone: (301) 504-8089.

STD-470 (6-98) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD-470 (03-96) which is obsolete.

200100102

Colorado State University

Appendix 1.

Potato Certification Service
San Luis Valley Research Center
0249 East Road 9 North
Center, Colorado 81125
(719) 754-3496
FAX: (719) 754-2619

№ 229

NOTICE TO RECEIVERS OF EXPERIMENTAL POTATO SELECTIONS Crop Year: _____

I understand that the potato selections that I am receiving are ***experimental selections*** from the Colorado State University Agricultural Experiment Station (CSU-AES) potato breeding and selection program and ***may be used for research or evaluation purposes only. I further understand*** that experimental selections are in the process of being evaluated prior to official release and accept such additional risks that may be associated with such potatoes. ***I agree*** not to hold the University or its representatives liable for any losses incurred as a result of production and/or disposition of these potatoes.

I also understand that I may not provide these potatoes to anyone else without approval of CSU-AES or its designated representative. ***I further understand*** that any of these selections may be released as a cultivar, and may be legally protected under the federal Plant Variety Protection Act or other mechanisms which may require royalty payments before being grown commercially. ***No right or license to control seed stocks of these potatoes is granted to me by this agreement.*** Information I develop about these materials and disposition of production with be freely shared with the CSU-AES when requested.

I hereby acknowledge that I am receiving the following experimental potatoes:

Grower:*	Receiver:

*Approval for grower sale of seed stocks of experimental selections requires the return of this completed form to Potato Certification Service.

Lot Number	Selection	Quantity (cwt/minitubers/plantlets)

Receiver Signature: _____ Date: _____

Address: _____ Telephone: _____

_____ Fax: _____

_____ E-mail: _____

Please return White and Goldenrod copies to Potato Certification Service, Attn: Dr. Robert D. Davidson at the letterhead address; Yellow copy to Buyer, Pink to Receiver. ***Please call if you have any questions.***

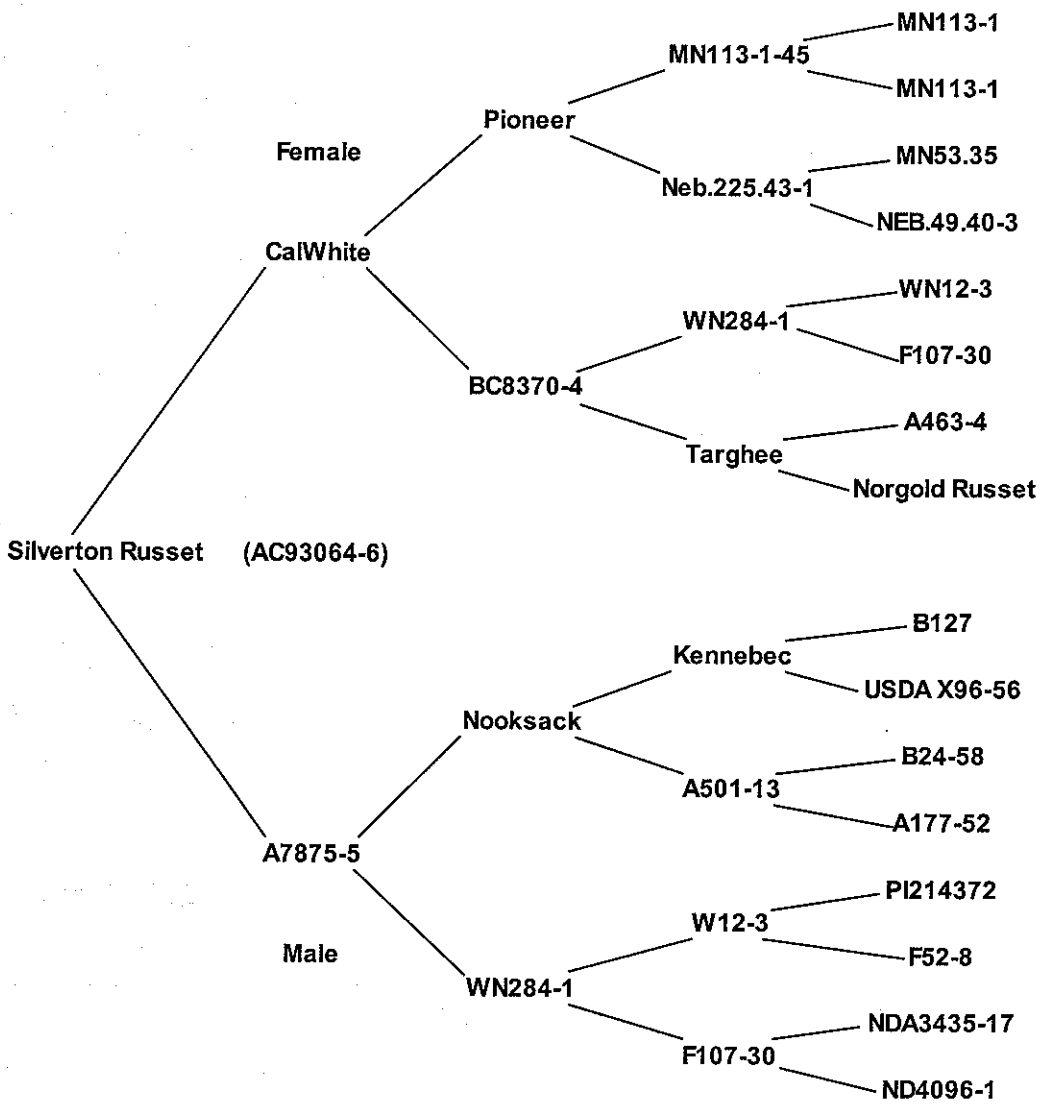
#200100102

Exhibit A

Origin and Breeding History of the Variety

1. Pedigree:

Silverton Russet, tested under pedigree number AC83064-6, was selected in 1985 at the San Luis Valley Research Center-Colorado State University, Center Colorado. It resulted from a cross of CalWhite (A76147-2) and A7875-5 made by the USDA-ARS at the University of Idaho Research and Extension Center, Aberdeen, Idaho in 1983 under the direction of Dr. J. J. Pavek. Pioneer and Targhee are in the parentage on the maternal side. Paternal ancestry includes Nooksack. **Silverton Russet** is a full-sib to Keystone Russet (AC83064-1).



Origin and Breeding History of the Variety

2. Selection and Multiplication:

Refer to Table 1 for an outline of the potato breeding, selection, and multiplication scheme for **Silverton Russet**.

Selection and early testing was done by Dr. David G. Holm, San Luis Valley Research Center-Colorado State University, Center, Colorado. Colorado State University personnel conducting cultural management trials and disease evaluations/observations were Dr. Asunta L. Thompson and Robert D. Davidson, respectively.

Primary criteria used in selecting **Silverton Russet** were high yield potential, attractive tuber type, and resistance to internal and external grade defects such as hollow heart, second growth, growth cracks, blackspot bruise, and shatter bruise.

Silverton Russet was evaluated in the Western Regional Trials in 1993-1995. These trials were conducted in several locations around the Western United States as part of WERA027 - Potato Variety Development.

Multiplication of **Silverton Russet** tubers for initial selection and research trials and subsequent seed increase was via vegetative means using tubers and/or tissue-cultured disease tested seed stocks.

3. Statement of Uniformity and Stability:

Silverton Russet has been observed for more than 15 years of field seed increase and/or tissue-culture production. No variants have been observed during this time indicating that **Silverton Russet** is uniform and stable.

Exhibit A (continued)

Table 1. Potato breeding, selection, and multiplication scheme for **Silverton Russet**.

Year	Comments
1	Select parents for crossing and true seed production in the greenhouse at Aberdeen, Idaho.
2	Produce seedling tubers from true seed in the greenhouse at Aberdeen, Idaho.
3	70,000-80,000 seedling tubers planted in the field as single hills. Several thousand tubers are obtained from other breeding programs. Initial selection of this material takes place at harvest. First cycle of field selection at the San Luis Valley Research Center.
4	Twelve-hills of each single-hill selection are planted. Second cycle of field selection.
5	Preliminary Selections 1 (P1). Third cycle of field selection (48 plant tuber-unit seed increase). Initial evaluations for chipping qualities (chip color after various storage regimes and specific ravity) are conducted this year and subsequently.
6	Preliminary Selections 2 (P2). Fourth cycle of field selection (96 plant tuber-unit seed increase). Initial evaluations to characterize selections for blackspot bruise potential, storage weight loss, dormancy, and enzymatic browning. Initial evaluations for french fry potential (french fry color and specific gravity) are conducted this year and subsequently. Evaluations for chipping qualities are continued.
7	Intermediate Selections. Fifth cycle of field selection. Initial data collected on yield, grade, and growth characteristics. Plant a 144 plant tuber-unit seed increase and a 2 rep x 25 plants intermediate yield trial (IYT).
8-9, 14+	Advanced Selections: Includes selections that have advanced from the IYT. Additionally selections are included that have graduated from the Southwest Regional and Western Regional Trials. The advanced yield trials for reds, specialty types, and chippers are planted with entries in the Western Regional Red, Specialty and Chip Trials. Selections are in the 6th-7th and 12+ cycles of field selection. All advanced yield trials (AYT) have 4 reps x 25 plants. Sixth- and seventh- year field selections respectively have a 400/1,600 plant tuber-unit seed increase. Selections in the sixth cycle of selection are indexed for viruses and cleanup/micropropagation is initiated. Testing for ring rot and PLRV reaction is also initiated at this stage and continues as needed. Selections in the 7th cycle of field selection are entered into cultural management trials and postharvest disease reaction (dry rot and soft rot) evaluations.
10	All 8th year selections have a 1/2 acre tuber-unit seed increase planted. These selections are entered in the Southwestern Regional Trials (4 locations - CO, TX, two in CA). Cultural management trials and postharvest disease reaction evaluations continue as needed.
11-13	All 9th year or older selections generally have a 1 acre or greater seed increase. These selections are entered in the Western Regional Trials (4 trials): main (russets and long whites), red, specialty , and chip. The Western Regional Committee (WERA027) directs these trials at 10+ locations in the Western United States each year. Cultural management trials and postharvest disease reaction evaluations continue as needed.
11+	Grower/industry evaluations. The Colorado Potato Breeding and Selection Project relies on the cooperation of several growers, shippers, and processors to evaluate advanced selections for adaptability and marketability.
14+	Release as a named cultivar.

Exhibit B

Statement of Distinctness

Based on overall morphology, **Silverton Russet** is most similar to Russet Norkotah. **Silverton Russet** most clearly differs from Russet Norkotah in the following traits:

Trait	**Silverton Russet**	Russet Norkotah	Evidence
Light sprout base (intensity of anthocyanin coloration)	Medium-Strong	Medium-Weak	Photograph attached
Light sprout tip (habit)	Closed	Intermediate	Photograph attached
Anther color chart value	9B	15A	RHS Color Chart
Stigma color chart value	143B	137D	RHS Color Chart
Eye number/tuber	10.6 +/- 1.9 (n=65)	15.1 +/- 1.9 (n=65)	Statistics attached

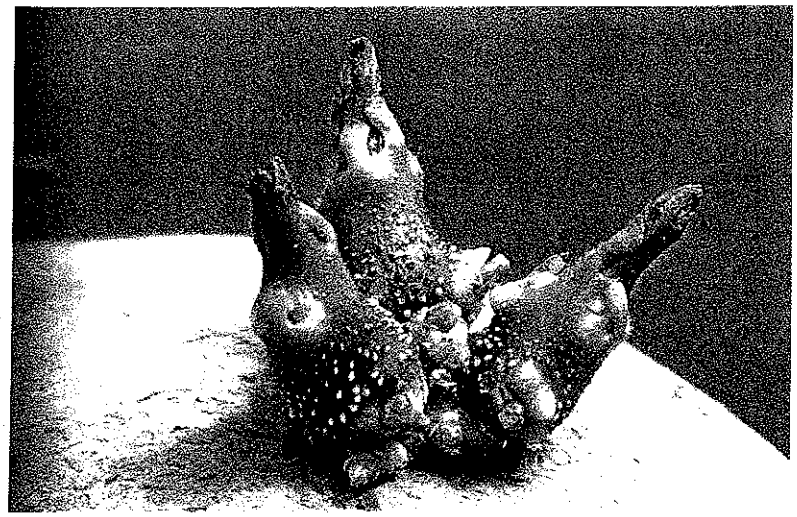
Exhibit B (continued)

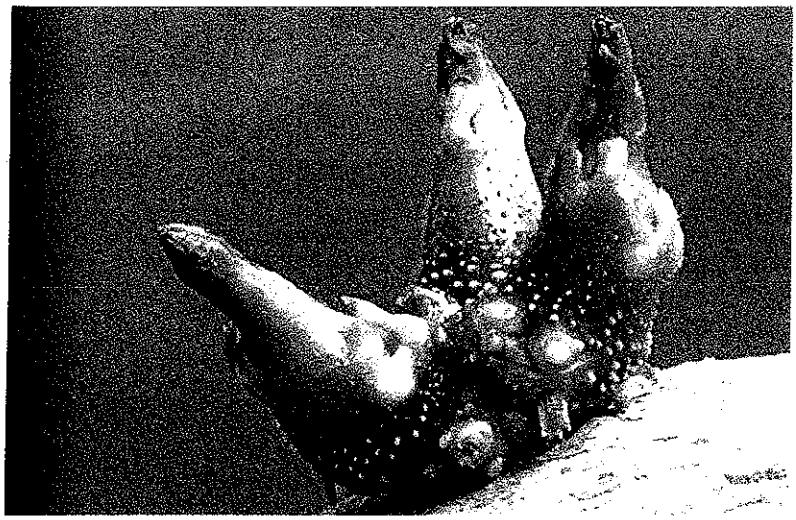
Statement of Distinctness

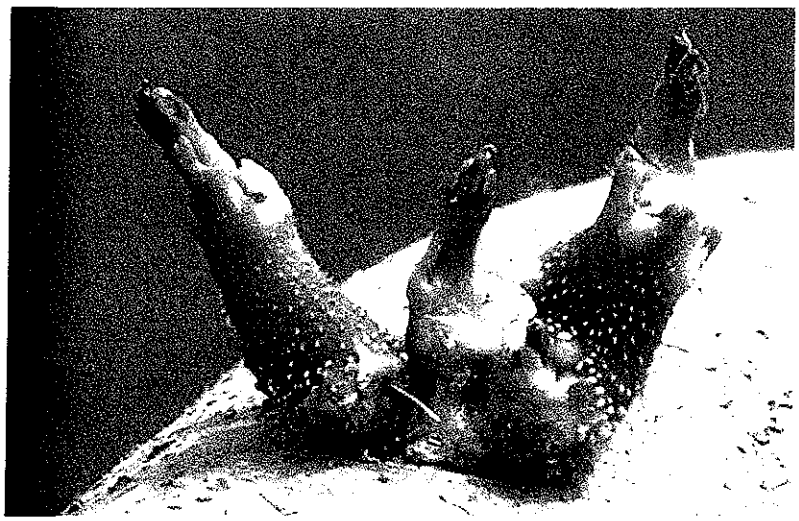
Eye Number/Tuber Analysis																		
Silverton Russet	11	11	10	14	9	9	11	10	12	12	10	10	16	7	12		Number	65
	10	12	9	10	11	10	11	11	14	10	10	11	13	11	13		Mean	10.6
	12	14	11	10	10	9	7	11	9	12	11	11	10	11	11		SD	1.9
	12	13	6	12	8	9	9	11	12	6	10	10	10	13	9			
	11	11	9	7	10													
Russet Norkotah	16	16	13	14	14	15	15	14	14	15	13	15	16	14	14		Number	65
	16	14	13	14	13	14	16	14	17	16	18	16	17	13	9		Mean	15.1
	16	17	16	15	16	15	14	18	16	16	17	18	21	14	14		SD	1.9
	15	12	16	15	18	14	15	16	14	14	15	17	17	15	15			
	17	18	15	13	10													
	16	16	13	14	14	15	15	14	14	15	13	15	16	14	14			
	16	14	13	14	13	14	16	14	17	16	18	16	17	13	9			
	16	17	16	15	16	15	14	18	16	16	17	18	21	14	14			
	15	12	16	15	18	14	15	16	14	14	15	17	17	15	15			
	17	18	15	13	10													

Sprouts Photos

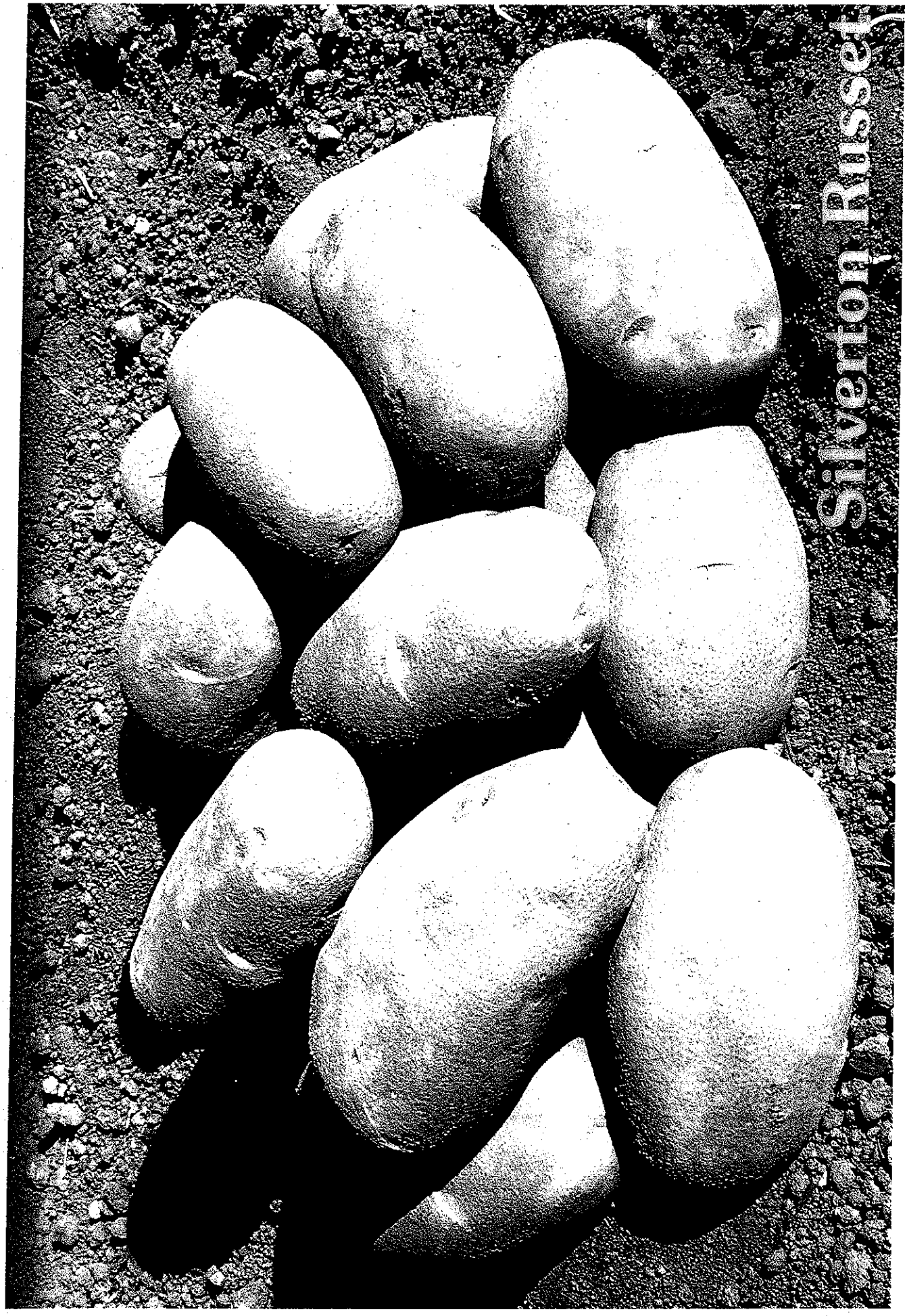
Top - Silverton Russet; Middle - Russet Burbank; Bottom - Russet Norkotah







Silverton Russet - Light Sprouts


Silverton Russet

Silverton Russet

NAME OF APPLICANT (S)	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME
President, Colorado Certified Potato Growers' Assn., Inc. .	AC83064-6	Silverton Russet

ADDRESS (Street and No. or RD No., City, State, Zip Code, and Country)
0249 East Road 9 North
Center, CO 81125

FOR OFFICIAL USE ONLY

PVPO NUMBER
#200100102

REFERENCE VARIETIES: Enter the reference variety name in the appropriate box.

Application Variety (V)	Reference Variety 1 (R1)	Reference Variety 2 (R2)	Reference Variety 3 (R3)	Reference Variety 4 (R4)
Silverton Russet	Russet Burbank	Russet Norkotah		

PLEASE READ ALL INSTRUCTIONS CAREFULLY:

1. MARKET CHARACTERISTICS:

***MARKET CLASS:**
1 = Yellow-flesh Tablestock 2 = Round-white Tablestock 3 = Chip-processing 4 = Frozen-processing
5 = Russet Tablestock 6 = Other _____

V	R1	R2	R3	R4
4/5	4/5	5		

2. LIGHT SPROUT CHARACTERISTICS: (See Figure 1)

***LIGHT SPROUT: GENERAL SHAPE**
1 = Spherical 2 = Ovoid 3 = Conica 4 = Broad cylindrica 5 = Narrow cylindrical 6 = Other _____

V	R1	R2	R3	R4
3	3	3		

***LIGHT SPROUT BASE: PUBESCENCE OF TIP**
1 = Absent 2 = Weak 3 = Medium 4 = Strong 5 = Very Strong

V	R1	R2	R3	R4
2.5	3.5	2.0		

***LIGHT SPROUT BASE: ANTHOCYANIN COLORATION**
1 = Green 2 = Red-violet 3 = Blue-violet 4 = Other(describe) _____

V	R1	R2	R3	R4
2	2	2		

***LIGHT SPROUT BASE: INTENSITY OF ANTHOCYANIN COLORATION (IF PRESENT)**
1 = Absent 2 = Weak 3 = Medium 4 = Strong 5 = Very Strong

V	R1	R2	R3	R4
3.5	2.5	2.5		

***LIGHT SPROUT TIP: HABIT**
1 = Closed 2 = Intermediate 3 = Open

V	R1	R2	R3	R4
1	2	2		

2. **LIGHT SPROUT CHARACTERISTICS:** (continued)

LIGHT SPROUT TIP: PUBESCENCE
1 = Absent 2 = Weak 3 = Medium 4 = Strong 5 = Very Strong

V	R1	R2	R3	R4
2	3	2		

LIGHT SPROUT TIP ANTHOCYANIN COLORATION
1 = Green 2 = Red-violet 3 = Blue-violet 4 = Other(describe) _____

V	R1	R2	R3	R4
1	1	1		

LIGHT SPROUT TIP: INTENSITY OF ANTHOCANIN COLORATION (IF PRESENT)
1 = Absent 2 = Weak 3 = Medium 4 = Strong 5 = Very Strong

V	R1	R2	R3	R4
1	1	1		

LIGHT SPROUT ROOT INITIALS: FREQUENCY
1 = Short 2 = Medium 3 = Long

V	R1	R2	R3	R4
2	1	2.5		

3. **PLANT CHARACTERISTICS:**

GROWTH HABIT: (See Figure 2)
3 = Erect (>45° with ground) 5 = Semi-erect (30-45° with ground) 7 = Spreading

V	R1	R2	R3	R4
3	6	7		

TYPE:
1 = Stem (foliage open, stems clearly visible) 2 = Intermediate 3 = Leaf (Foliage closed, stems hardly visible)

V	R1	R2	R3	R4
3	2	3		

MATURITY: Days after planting (DAP) at vine senescence

V	R1	R2	R3	R4

PLANTING DATE:

V	R1	R2	R3	R4

***REGIONAL AREA:**
1 = Pacific North West (WA, OR, ID, CO, CA) 2 = North Central (ND, WI, MI, MN, OH) 3 = North East (ME, NY, PA, NJ, MD, MA, RI,)
4 = Mid-Atlantic Erect (VI, NC, SC, South NJ, FL) 5 = South (LA, TX, AZ, NE) 6 = Canada
7 = Europe 8 = England 9 = Latin America 10 = Brazil 11 = Other _____

V	R1	R2	R3	R4
1	1	1		

MATURITY CLASS:
1 = Very Early (<100 DAP) 2 = Early (100-110 DAP) 3 = Mid-season (111-120 DAP) 4 = Late (121-130 DAP) 5 = Very Late (>130 DAP).

V	R1	R2	R3	R4

4. STEM CHARACTERISTICS: Measure at early first bloom

*** STEM ANTHOCYANIN COLORATION:**
1 = Absent 3= Weak 5 = Medium 7 = Strong 9 = Very Strong

V	R1	R2	R3	R4
1	1	1		

STEM WINGS: (See Figure 3)
1 = Absent 3 = Weak 5 = Medium 7 = Strong 9 = Very Strong

V	R1	R2	R3	R4
5	3	2		

5. LEAF CHARACTERISTICS:

LEAF COLOR: (*Observe fully developed leaves located on middle 1/3 of plant)*
1 = Yellowing-green 2 = Olive-green 3 = Medium Green 4 = Dark Green 5 = Grey-green 6 = Other _____

V	R1	R2	R3	R4
4	1	3		

LEAF COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsell Color Chart
(Observe fully developed leaves located on middle 1/3 of plant and circle the appropriate color chart)

V	R1	R2	R3	R4
137A	137B	137B		

LEAF PUBESCENCE DENSITY:
1 = Absent 2 = Sparse 3 = Medium 4 = Thick 5 = Heavy

V	R1	R2	R3	R4

LEAF PUBESCENCE LENGTH:
1 = None 2 = Short 3 = Medium 4 = Long 5 = Very Long

V	R1	R2	R3	R4

(Note Descriptor #15 can be used to describe the type and length of the glandular trichomes observed.)

*** LEAF SILHOUETTE:** (See Figure 4)
1 = Closed 3 = Medium 5 = Open

V	R1	R2	R3	R4
3	5	4.5		

PETIOLES ANTHOCYANIN COLORATION:
1 = Absent 3 = Weak 5 = Medium 7 = Strong 9 = Very Strong

V	R1	R2	R3	R4
1	1	1		

LEAF STIPULES SIZE: (Se Figure 5)
1 = Absent 3 = Small 5 = Medium 7 = Large

V	R1	R2	R3	R4
7	3	5		

TERMINAL LEAFLET SHAPE (See Figures 6 and 7)
1 = Narrowly ovate 2 = Medium Ovate 3 = Broadly Ovate 4 = Lanceolate 5 = Elliptical 6 = Obovate 7 = Oblong 8 = Other _____

V	R1	R2	R3	R4
5	1	2		

5. **LEAF CHARACTERISTICS:** (continued)

TERMINAL LEAFLET TIP SHAPE: (See Figures 6 and 8)
1 = Acute 2 = Cuspidate 3 = Acuminate 4 = Obtuse 5 = Other _____

V	R1	R2	R3	R4
3	3	3		

* **TERMINAL LEAFLET BASE SHAPE:** (See Figure 9)
1 = Cuneate 2 = Acute 3 = Obtuse 4 = Cordate 5 = Truncate 6 = Lobed 7 = Other _____

V	R1	R2	R3	R4
4	4	4		

TERMINAL LEAFLET MARGIN WAVINESS:
1 = Absent 2 = Slight 3 = Weak 4 = Medium 5 = Strong

V	R1	R2	R3	R4
3	2	2		

NUMBER OF PRIMARY LEAFLET PAIRS: (See Figure 6)

AVERAGE:

V	R1	R2	R3	R4
4.3	4.2	4.7		

RANGE:

V	R1	R2	R3	R4
2 to 5	3 to 5	4 to 6	to	to

PRIMARY LEAFLET TIP SHAPE: (See Figures 6 and 8)
1 = Acute 2 = Cuspidate 3 = Acuminate 4 = Obtuse 5 = Other _____

V	R1	R2	R3	R4
3	3	3		

PRIMARY LEAFLET SIZE:
1 = Very Small 2 = Small 3 = Medium 4 = Large 5 = Very Large

V	R1	R2	R3	R4
3	2	3		

PRIMARY LEAFLET SHAPE: (See Figures 6 and 7)
1 = Narrowly ovate 2 = Medium ovate 3 = Broadly ovate 4 = Lanceolate 5 = Elliptical 6 = Ovate 7 = Oblong 8 = Other _____

V	R1	R2	R3	R4
5	5	1		

PRIMARY LEAFLET BASE SHAPE: (See Figures 6 and 9)
1 = Cuneate 2 = Acute 3 = Obtuse 4 = Cordate 5 = Truncate 6 = Lobed 7 = Other _____

V	R1	R2	R3	R4
4	4	4		

NUMBER OF SECONDARY AND TERTIARY LEAFLET PAIRS: (See Figure 6)

AVERAGE:

V	R1	R2	R3	R4
5	6.9	8.8		

RANGE:

V	R1	R2	R3	R4
1 to 8	2 to 10	3 to 15	to	to

5. **LEAF CHARACTERISTICS:** (continued)

NUMBER OF INFLORESCENCE/PLANT:

AVERAGE:

V	1.7	R1	0.9	R2	0.1	R3		R4	

RANGE:

V	0 to 4	R1	0 to 3	R2	0 to 1	R3	to	R4	to

NUMBER OF FLORETS/INFLORESCENCE:

AVERAGE:

V	12.5	R1	11.2	R2	5.3	R3		R4	

RANGE:

V	2 to 25	R1	2 to 27	R2	3 to 7	R3	to	R4	to

*** COROLLA INNER SURFACE COLOR CHART VALUE:** Royal Horticulture Society Color Chart or Munsell Color Chart (Measure predominant color of newly open flower and circle the appropriate color chart)

V	155C	R1	4D	R2	155C	R3		R4	

*** COROLLA OUTER SURFACE COLOR CHART VALUE:** Royal Horticulture Society Color Chart or Munsell Color Chart (Measure predominant color of newly open flower and circle the appropriate color chart)

V	155C	R1	4D	R2	155C	R3		R4	

*** COROLLA INNER SURFACE COLOR:** (Measure predominant color of newly open flower, if flowers are bi-color please use the ratio codes)
1 = White 2 = Red-violet 3 = Blue-violet 4 = Cream 5 = Red-purple 6 = Blue 7 = Pink 8 = Pink-white 9 = Purple 10 = Violet 11 = Purple-violet 13 = Violet-White 1:1 14 = Violet-White 1:3 15 = Violet-White 3:1 16 = Violet-White Halo 17 = Pink-White 1:1 18 = Pink-White 1:3 19 = Pink-White 3:1 20 = Pink-White Halo 21 = RedViolet-White 1:1 22 = RedViolet-White 1:3 23 = RedViolet-White 3:1 24 = RedViolet-White Halo 25 = BlueViolet-White 1:1 26 = BlueViolet-White 1:3 27 = BlueViolet-White 3:1 28 = BlueViolet-White Halo 12 = Other _____

V	4	R1	4	R2	4	R3		R4	

COROLLA SHAPE: (See Figure 10)
1 = Very rotate 2 = Rotate 3 = Pentagonal 4 = Semi-stellate 5 = Stellate

V	3	R1	3	R2	4	R3		R4	

6. **INFLORESCENCE CHARACTERISTICS:**

CALYX ANTHOCYANIN COLORATION:
1 = Absent 3 = Weak 5 = Medium 7 = Strong 9 = Very strong

V	5	R1	2	R2	1	R3		R4	

ANTHER COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsel Color Chart (Measure when newly opened flower is fully expanded and circle the appropriate color chart)

V	9B	R1	9A	R2	15A	R3		R4	

ANTHER SHAPE: (See Figure 11)
1 = Broad cone 2 = Narrow cone 3 = Pear-shaped cone 4 = Loose 5 = Other

V	2	R1	3	R2	2	R3		R4	

6. INFLORESCENCE CHARACTERISTICS: (continued)

POLLEN PRODUCTION:
1 = None 3 = Some 5 = Abundant

V	R1	R2	R3	R4
5	1	3		

STIGMA SHAPE: (See Figure 12)
1 = Capitate 2 = Clavate 3 Bi-lobed

V	R1	R2	R3	R4
1	1	1		

STIGMA COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsel Color Chart (Circle the appropriate color chart)

V	R1	R2	R3	R4
143B	144A	137D		

BERRY PRODUCTION: (Under field conditions)
1 = Absent 3 = Low 5 = Moderate 7 = Heavy 9 = Very Heavy

V	R1	R2	R3	R4
6	1	1		

7. TUBER CHARACTERISTICS:

*** PREDOMINANT SKIN COLOR:**
1 = White 2 = Light Yellow 3 = Yellow 4 = Buff 5 = Tan 6 = Brown 7 = Pink 8 = Red 9 = Purplish-red
10 = Purple 11 = Dark purple-black 12 = Other _____

V	R1	R2	R3	R4
6	6	6		

PREDOMINANT SKIN COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsell Color Chart (Circle the appropriate color chart)

V	R1	R2	R3	R4
199B	199B	199B		

SECONDARY SKIN COLOR:
1 = Absent 2 = Present (please describe)

V	R1	R2	R3	R4
1	1	1		

SECONDARY SKIN COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsell Color Chart (Circle the appropriate color)

V	R1	R2	R3	R4

SECONDARY SKIN COLOR DISTRIBUTION: (See Figure 13)
1 = Eyes 2 = Eyebrows 3 = Splashed 4 = Scattered 5 = Spectacled 6 = Stippled 7 = Other _____

V	R1	R2	R3	R4

SKIN TEXTURE:
1 = Smooth 2 = Rough (flaky) 3 = Netted 4 = Russetted 5 = Heavily russetted 6 = Other _____

V	R1	R2	R3	R4
4	4	4		

7. **TUBER CHARACTERISTICS:** (continued)

*** TUBER SHAPE:** (See Figure 14)
1 = Compressed 2 = Round 3 = Oval 4 = Oblong 5 = Long 6 = Other _____

V	R1	R2	R3	R4
5	5	5		

TUBER THICKNESS:
1 = Round 2 = Medium thick 3 = Slightly flattened 4 = Flattened 5 = Other _____

V	R1	R2	R3	R4
2	3	2		

TUBER LENGTH (mm):

AVERAGE:

V	R1	R2	R3	R4
107	113	111		

RANGE:

V	R1	R2	R3	R4
82 to 129	98 to 138	93 to 128	to	to

STANDARD DEVIATION:

V	R1	R2	R3	R4
10	10	8		

AVERAGE WEIGHT OF SAMPLE TAKEN:

V	R1	R2	R3	R4
226	222	217		

TUBER WIDTH (mm)

AVERAGE:

V	R1	R2	R3	R4
69	68	66		

RANGE:

V	R1	R2	R3	R4
62 to 82	60 to 74	58 to 75	to	to

STANDARD DEVIATION:

V	R1	R2	R3	R4
3	4	3		

AVERAGE WEIGHT OF SAMPLE TAKEN (g):

V	R1	R2	R3	R4
226	222	217		

7. **TUBER CHARACTERISTICS:** (continued)

TUBER THICKNESS (mm):

AVERAGE:

V	R1	R2	R3	R4
58	56	57		

RANGE:

V	R1	R2	R3	R4
51 to 65	48 to 65	48 to 66	to	to

STANDARD DEVIATION:

V	R1	R2	R3	R4
3	4	4		

AVERAGE WEIGHT OF SAMPLE TAKEN (g):

V	R1	R2	R3	R4
226	222	217		

TUBER EYE DEPTH:

1 = Protruding 3 = Shallow 5 = Intermediate 7 = Deep 9 = Very deep

V	R1	R2	R3	R4
3	4	4		

TUBER LATERAL EYES:

1 = Protruding 3 = Shallow 5 = Intermediate 7 = Deep 9 = Very deep

V	R1	R2	R3	R4
3	4	4		

NUMBER EYE/TUBER:

AVERAGE:

V	R1	R2	R3	R4
11	15	15		

RANGE:

V	R1	R2	R3	R4
6 to 16	9 to 21	9 to 21	to	to

DISTRIBUTION OF TUBER EYES:

1 = Predominantly apical 2 = Evenly distributed

V	R1	R2	R3	R4
1	2	2		

PROMINENCE OF TUBER EYEBROWS:

1= Absent 2 = Slight prominence 3 = Medium prominence 4 = Very prominent 5 = Other _____

V	R1	R2	R3	R4
2	2	2		

7. **TUBER CHARACTERISTICS**: (continued)

PREDOMINANT TUBER FLESH COLOR
1 = White 2 = Light Yellow 3 = Yellow 4 = Buff 5 = Tan 6 = Brown 7 = Pink 8 = Red 9 = Purplish-red
10 = Purple 11 = Dark purple-black 12 = Other Light Cream

V	12	R1	12	R2	12	R3		R4	

PRIMARY TUBER FLESH COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsell Color Chart (Circle the appropriate color chart)

V	160D	R1	160D	R2	160D	R3		R4	

SECONDARY TUBER FLESH COLOR:

1 = Absent 2 = Present, please describe: _____

V	1	R1	1	R2	1	R3		R4	

SECONDARY TUBER FLESH COLOR CHART VALUE: Royal Horticulture Society Color Chart or Munsell Color Chart (Circle the appropriate color chart)

V		R1		R2		R3		R4	

NUMBER OF TUBERS/PLANT:
1 = Low (<8) 2 = Medium (8-15) 3 = High (>15)

V		R1		R2		R3		R4	

8. DISEASES CHARACTERISTICS:

DISEASES REACTION: 0 = Not Tested 1 = Highly Resistant 2 = Resistant Few Symptoms 3 = Resistance Few Lessions in Number and Size 4 = Moderately Resistance 5 = Intermedia Susceptible 6 = Moderate Susceptible 7 = Susceptible 9 = Highly Susceptible

LATE BLIGHT: (Phytophthora)

V	R1	R2	R3	R4
0	0	0		

EARLY BLIGHT: (Alternaria)

V	R1	R2	R3	R4
0	0	0		

SOFT ROT (Erwinia)

V	R1	R2	R3	R4

COMMON SCAB (Streptomyces)

V	R1	R2	R3	R4

POWDERY SCAB (Spongospora)

V	R1	R2	R3	R4

DRY ROT (Fusarium)

V	R1	R2	R3	R4

POTATO LEAF ROLL VIRUS (PLRV)

V	R1	R2	R3	R4

8. DISEASES CHARACTERISTICS: (continued)

POTATO VIRUS X (PVX)

V		R1		R2		R3		R4	

POTATO VIRUS Y (PVY)

V		R1		R2		R3		R4	

POTATO VIRUS M (PVM)

V		R1		R2		R3		R4	

POTATO VIRUS A (PVA)

V		R1		R2		R3		R4	

GOLDEN NEMATODE (Globodera)

V		R1		R2		R3		R4	

ROOT – KNOT NEMATODE (Meloidogyne)

V		R1		R2		R3		R4	

OTHER DISEASE _____

V		R1		R2		R3		R4	

PHYSIOLOGICAL DISORDER

1 = Malformed shape 2 = Tuber cracking 3 = Feathering 4 = Hollow heart 5 = Internal necrosis
6 = Blackheart 7 = Internal sprouting 8 = Other _____

V		R1		R2		R3		R4	

9. PESTS CHARACTERISTICS:

PEST REACTION: 0 = Not Tested 1 = Highly Resistant 2 = Resistant Few Symptoms 3 = Resistance Few Lessions in Number and Size
4 = Moderately Resistance 5 = Intermedia Susceptible 6 = Moderate Susceptible
7 = Susceptible 9 = Highly Susceptible

COLORADO POTATO BEETLE (CPB) (*Leptinotarsa*)

V		R1		R2		R3		R4	

GREEN PEACH APHID (*Myzus*)

V		R1		R2		R3		R4	

OTHER:

V		R1		R2		R3		R4	

OTHER:

V		R1		R2		R3		R4	

10. GENE TRAITS:

INSERTION OF GENES: 1 = YES 2 = NO [X]

IF YES, describe the gene(s) introduced or attach information:

11. QUALITY CHARACTERISTICS:

CHIEF MARKET:

SPECIFIC GRAVITY (wt. air/wt. air – wt. water)
1 = <1.060 2 = 1.060-1.069 3 = 1.070-1.079 4 = 1.080-1.089 5 = >1.090

V	4	R1	4	R2	3	R3		R4	

TOTAL GLYCOALKALOID CONTENT (mg./100 g. fresh tuber)

V		R1		R2		R3		R4	

OTHER QUALITY CHARACTERISTICS: Describe any other quality characteristics that may aid in identification, (e.g., chip-processing, french fry processing, baking, boiling, after-cooking darkening). Please attach data and corresponding protocol.

Please refer to Exhibit D for supplemental information regarding yield, grade, growth, and processing characteristics of Silverton Russet.

12. CHEMICAL IDENTIFICATION:

Describe chemical traits of the candidate variety that aid in its identification (e.g., protien or DSN electrophoresis). Please attach data and the corresponding protocol.

13. FINGER PRINTING MARKERS:

ISOZYMES 1 = YES 2 = NO [X]

IF YES, attach information

14. DNA PROFILE: 1 = YES 2 = NO [X]

IF YES, attach information

15. ADDDITIONAL COMMENTS AND CHARACTERISTICS:

Include any additional descriptors that would be useful in distringuishing the candidate variety.

Tuber photos were previously submitted for Silverton Russet. Photographs of light sprouts of Silverton Russet and comparison cultivars Russet Burbank and Russet Norkotah are attached with this updated Exhibit C.

Exhibit D

Optional Supplemental Information

Field trials were conducted on a Norte gravelly sandy loam soil at the San Luis Valley Research Center, Center, CO in 1993-1995 and 2000. All trials were planted in a randomized complete block design with four replications. Each replication consisted of a single row 25 ft long. Between-row spacing was 34 in and in-row spacing, 12 in.

Data were analyzed by analysis of variance within a year. The LSD was used to test for differences among means when the F test for a variable was significant.

Following is a bulleted summary of the general statistical differences observed for **Silverton Russet** in the replicated yield trials.

- Lower total yield compared to Russet Burbank and greater total yield than Russet Norkotah.
- Greater yield of US #1 tubers than Russet Norkotah.
- Greater % of US #1 tubers than Russet Burbank and Russet Norkotah.
- Greater yield of >10 oz tubers than Russet Burbank and Russet Norkotah.
- Lower yield of <4 oz tubers than Russet Burbank.
- Larger vine size than Russet Norkotah.
- Later maturing than Russet Norkotah.
- Lower specific gravity than Russet Burbank and greater than Russet Norkotah.
- Fry color similar to or better than Russet Burbank and better than Russet Norkotah.

Exhibit D (continued)

Optional Supplemental Information

Table 1. Yield and grade of **Silverton Russet** compared with Russet Burbank and Russet Norkotah, 1993-1995 and 2000.

	Yield (Cwt/A)				
		US #1			
Cultivar	Total	Total	%	>10 oz	<4 oz
1993					
Silverton Russet	442	386	87.5	153	51
Russet Burbank	491	408	83.2	123	68
Russet Norkotah	349	321	91.4	132	27
LSD (0.05)[1]	65	73	6.3	67	20
1994					
Silverton Russet	388	355	91.4	149	27
Russet Burbank	456	333	73.0	75	101
Russet Norkotah	185	150	81.0	66	34
LSD (0.05)[1]	54	58	6.5	46	20
1995					
Silverton Russet	329	298	90.8	144	28
Russet Burbank	399	295	73.8	77	83
Russet Norkotah	289	256	88.5	129	26
LSD (0.05)[1]	35	35	5.9	40	17
2000					
Silverton Russet	419	368	87.7	102	49
Russet Burbank	476	361	75.9	121	91
Russet Norkotah	426	355	83.2	97	67
LSD (0.05)[1]	44	45	4.3	59	17

[1]LSD=least significant difference.

Exhibit D (continued)

Optional Supplemental Information

Table 2. Plant and processing characteristics for **Silverton Russet** compared with Russet Burbank and Russet Norkotah, 1993-1995 and 2000.

Clone	% Stand	Vine Size[1]	Vine Maturity[2]	Specific Gravity	Fry Color[3]	Fry Color[4]
1993						
Silverton Russet	96	3.0	3.2	1.079	2	2
Russet Burbank	99	3.8	3.0	1.084	2	2
Russet Norkotah	96	1.8	1.5	1.078	3	3
LSD (0.05)[5]	NS	0.5	0.6	----	----	----
1994						
Silverton Russet	99	4.0	3.0	1.072	2	2
Russet Burbank	98	4.2	2.8	1.078	2	2
Russet Norkotah	93	1.2	1.5	1.071	2	3
LSD (0.05)[5]	4	0.5	0.5	----	----	----
1995						
Silverton Russet	99	3.0	2.8	1.076	1	1
Russet Burbank	97	4.0	3.0	1.086	2	2
Russet Norkotah	99	3.0	2.8	1.078	3	2
LSD (0.05)[5]	NS	0.5	0.4	----	----	----
2000						
Silverton Russet	98	4.0	2.8	1.084	1	2
Russet Burbank	100	3.5	3.0	1.085	1	2
Russet Norkotah	98	3.0	2.0	1.080	1	1
LSD (0.05)[5]	NS	0.5	0.4	----	----	----

[1]Vine size is rated on a 1 to 5 scale, with 5 indicating very large vines.

[2]Vine maturity is rated on a 1 to 5 scale, with 5 indicating very late maturing vines.

[3]Fry color was rated at harvest on a 0 to 4 scale (USDA color standards), with 0 being the lightest color. Color ratings of ≤2 are acceptable. Fries were cooked for 3 ½ minutes at 375F.

[4]Fry color was rated after 8 weeks of storage at 45F.

[5]LSD=least significant difference; NS=not significant.

Appendix C.

COLORADO AGRICULTURAL EXPERIMENT STATION
COLORADO STATE UNIVERSITY
FORT COLLINS, COLORADO

and

IDAHO AGRICULTURAL EXPERIMENT STATION
UNIVERSITY OF IDAHO
MOSCOW, IDAHO

and

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICES
WASHINGTON, D. C.

NOTICE OF THE NAMING AND OFFICIAL RELEASE OF **SILVERTON RUSSET**, A HIGH YIELDING, DUAL-PURPOSE CULTIVAR

The Colorado and Idaho Agricultural Experiment Stations and the Agricultural Research Service, United States Department of Agriculture announce the release of the potato cultivar **Silverton Russet**. **Silverton Russet** was primarily selected for fresh market use. **Silverton Russet** was named after the 1874 historic mining town, Silverton, Colorado, so named for the abundant supplies of silver mined in the area.

Silverton Russet, tested under pedigree number AC83064-6, was selected in 1985 at the San Luis Valley Research Center-Colorado State University, Center Colorado. It resulted from a cross of CalWhite (A76147-2) and A7875-5 made by the USDA-ARS at the University of Idaho Research and Extension Center, Aberdeen, Idaho in 1983 under the direction of J. J. Pavek. Pioneer and Targhee are in the parentage on the maternal side. Paternal ancestry includes Nooksack. **Silverton Russet** is a full-sib to Keystone Russet (AC83064-1).

Selection and early testing was done by D. G. Holm, San Luis Valley Research Center-Colorado State University, Center, Colorado. Colorado State University personnel conducting cultural management trials and disease evaluations/observations were A. L. Thompson and R. D. Davidson, respectively. Additional disease evaluations were performed by D. L. Corsini, USDA-ARS, as part of Western Regional Coordinating Committee No. 27 (WCC-27). Advanced testing, seed increase, and commercial evaluation was assisted by WCC No. 27 participants, several seed and commercial growers, and other private cooperators in the Western United States.

Silverton Russet was evaluated in the Western Regional Trials in 1993-1995. Seed was released in Colorado for controlled increase and commercial trials in 1993. In 2000, 503 acres of certified seed were planted in Colorado.

Silverton Russet emerges rapidly and produces an erect, medium-large sized vine with white flowers. Vine maturity is medium. Field trials have shown that **Silverton Russet** is sensitive to metribuzin. Results of disease tests and other observations indicate that **Silverton Russet** is susceptible to most common diseases.

Silverton Russet is very susceptible to PVY with potentially high levels of spread. Early season mosaic symptom expression of PVY may be latent. Tubers are moderately susceptible to soft rot, *Alternaria* dry rot, and susceptible to *Fusarium sambucinum* dry rot. Results of field tests and other observations indicate that leafroll expression is good with suitable color change and whole plant symptom expression.

Leafroll spread is moderate. Tubers are resistant to leafroll net necrosis and common scab. **Silverton Russet** is moderately susceptible to *Verticillium* wilt and susceptible to foliar early blight and late blight. Foliar and tuber ring rot expression is typical. Foliar expression occurs within 90 days in the San Luis Valley. Tuber symptoms are readily evident at harvest.

Tubers of **Silverton Russet** are oblong to long with a medium russet skin and white flesh. Tuber type is attractive. Eyes are shallow and distributed more heavily near the apical end. Tubers have a short dormancy with good storability and few internal problems. Adequate skin set at harvest is important to ensure good storage quality. Tubers are resistant to hollow heart, second growth, growth crack, blackspot bruise, and shatter bruise.

Silverton Russet has high yield potential (Table 1). US No. 1 yields are 16 and 10% greater than Russet Norkotah in Colorado and Idaho respectively. Compared with Russet Burbank in Idaho, US No. 1 yields of Silverton Russet were 11% greater. The medium maturity of **Silverton Russet** makes it better suited to a limited growing season than Russet Nugget.

Table 1. Performance of **Silverton Russet** compared with standard cultivars in trials in Colorado and Idaho.

Location/ Cultivar	Location Years	Yield		% US No. 1	Vine Maturity[1]	Specific Gravity
		Total	US No. 1			
Colorado						
Silverton Russet	10	396	339	86	3.1	1.078
Russet Norkotah	10	341	292	85	1.8	1.075
Russet Nugget	10	420	350	83	3.9	1.095
Idaho[2]						
Silverton Russet	3	335	275	82	---	1.077
Russet Norkotah	3	311	249	80	---	1.075
Silverton Russet	8	391	336	86	3.3	1.077
Russet Burbank	8	451	302	67	2.8	1.082

[1]Vine maturity: 1=very early; 5=very late.

[2]Comparison with Russet Norkotah and Russet Burbank is for early and late harvests respectively.

Fry color of **Silverton Russet** is similar to Russet Nugget at harvest and after 45°F storage. While french fry color is suitable for processing, specific gravity may be marginal in some production conditions.

Silverton Russet has been grown on a commercial scale in Colorado, California, and Wisconsin with notable success. It appears to have wide adaptability in irrigated areas of the West and Midwest.

Plant Variety Protection will be applied for. Ownership of **Silverton Russet** has been assigned to the Colorado Certified Potato Growers' Association (CCPGA). This assignment is based on an agreement between CCPGA and the Colorado State Board of Agriculture acting by and through Colorado State University.

Seed is available from growers listed in the Colorado seed directory. Limited amounts for research purposes are available from D. G. Holm, San Luis Valley Research Center, Colorado State University, 0249 East Road 9 North, Center, CO 81125 (Telephone: 719-754-3594, ext. 14; Fax: 719-754-2619; E-mail: spudmkr@coop.ext.colostate.edu).

A cultivar specific management profile for **Silverton Russet** is available from A. L. Thompson at the address cited above (Telephone: 719-754-3594, ext. 13; Fax: 719-754-2619; E-mail: athompso@coop.ext.colostate.edu).

Director, Colorado Agricultural Experiment Station	Date
Director, Idaho Agricultural Experiment Station	Date
Administrator, USDA-Agricultural Research Service	Date

200100102

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
President Colorado Certified Potato Growers' Assn., Inc.	AC83064-6	Silverton Russet

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP, and Country)*	5. TELEPHONE *(include area code)*	6. FAX *(include area code)*
0249 East Road 9 North Center, CO 81125	(719) 754-3496	(719) 754-2619

7. PVPO NUMBER

200100102

8. Does the applicant own all rights to the variety? *Mark an "X" in appropriate block.* **If no, please explain.** [X] YES [ ] NO

9. Is the applicant (individual or company) a U.S. national or U.S. based company? [X] YES [ ] NO
If no, give name of country

10. Is the applicant the original owner? [ ] YES [X] NO ***If no, please answer one of the following:***

a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)?

[ ] YES [ ] NO **If no, give name of country**

b. If original rights to variety were owned by a company(ies), is(are) the original owner(s) a U.S. based company?

[X] YES [ ] NO **If no, give name of country**

11. Additional explanation on ownership *(if needed, use reverse for extra space)*:

The Colorado Certified Potato Growers' Association, Inc., and the governing board of Colorado State University, the Colorado State Board of Agriculture, entered into an agreement on February 1, 1998. This agreement allows the transfer of ownership of potato cultivars developed at Colorado State University by the Agricultural Experiment Station to the Colorado Certified Potato Growers' Association.

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.

2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.

3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

STD-470-E (07-97) *(Destroy previous editions).*
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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT F
DECLARATION REGARDING DEPOSIT

NAME OF OWNER (S)	ADDRESS *(Street and No. or RD No., City, State, and Zip Code and Country)*	TEMPORARY OR EXPERIMENTAL DESIGNATION
President, Colorado Certified Potato Growers' Assn., Inc. LMC 8-22-07 Authorization to change	0249 East Road 9 North Center, CO 81144	AC83064-6 **VARIETY NAME** Silverton Russet
NAME OF OWNER REPRESENTATIVE (S) Sheldon Rockey	**ADDRESS** *(Street and No. or RD No., City, State, and Zip Code and Country)* 0249 East Road 9 North Center, CO 81144	FOR OFFICIAL USE ONLY **PVPO NUMBER** #200100102

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

Sheldon Rockey
Signature

4/11/07
Date

Exhibit F

Upon the request of the Commissioner of the Plant Variety Protection Office, the Colorado Certified Potato Growers' Association, Inc. agrees to deposit in a public repository in the United States a viable tissue culture sample for the variety **Silverton Russet** upon issuance of a certificate of protection. The Colorado Certified Potato Growers' Association, Inc. further agrees to replenish the sample if viability does not meet or falls below required standards.

President, Colorado Certified Potato Growers' Association, Inc.